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950 West Bannock Street, Suite 900
Boise, Idaho 83702

December 20, 2013

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Ms. Kris McCaig
Teck American Incorporated
501 N Riverpoint Blvd., Suite 300
PO Box 3087
Spokane, Washington 99220-3087

RE: Quality Assurance Project Plan for the Bossburg Flats Beach Refined Sediment Study, Upper Columbia River Project

Dear Ms. McCaig,

On July 23, 2013, the U.S. Environmental Protection Agency received Teck American Incorporated's Notice of Dispute regarding EPA's comments on the draft Quality Assurance Project Plan for the Bossburg Flats Beach Refined Sediment Study, Upper Columbia River Project. Since that time, Teck and the EPA have been in an informal dispute resolution process. The enclosed responses represent a resolution to the disputed comments on the Bossburg QAPP. This concludes the informal dispute regarding EPA's comments. Accordingly, Teck must submit a revised version of the sediment QAPP that incorporates these resolutions within 45 days of the receipt of this letter.

If there are any concerns regarding this letter, you may contact me at 208/378-5760.

Sincerely,

R Matthew Wilkening

R. Matthew Wilkening
Upper Columbia River Project Manager

Enclosure

cc: Dan Audet, U.S. Dept. of Interior
Patti Bailey, Confederated Tribes of the Colville Reservation
Randy Connolly, Spokane Tribe of Indians
John Roland, WA Dept. of Ecology
Laura Buelow, EPA-Hanford Office, email only
Dennis Faulk, EPA-Hanford Office, email only

Resolution of Teck American Incorporated's dispute of EPA's Comments on The Draft Quality Assurance Project Plan for Bossburg Flats Beach Refined Sediment Study for The Upper Columbia River Project

On July 19, 2013, Teck American Incorporated (TAI) sent EPA a notice of dispute regarding three of EPA's comments on the Draft Quality Assurance Project Plan for Bossburg Flats Beach Refined Sediment Study for the Upper Columbia River Project.

This letter documents the resolution of those comments. The format for each dispute is to copy TAI's disputed comment, state EPA's original comment, and conclude with the resolution.

Disputed Comment 1: TAI disputes EPA's requirement that TAI remove from the QAPP statements that the Young American Mine and Mill (YAM) Site is a source of contaminants to the UCR Site. EPA's comment was

> P. A-1, section A4.1, page A-4; A5, p. A-5; A7.1, page A-6; section B1, page B-1; and Appendix A, Introduction, second paragraph: the text reads as though the contamination at Bossburg beach to Evans campground is due to mining activities at YAM. This is particularly evident in the Appendix overview first two sentences which imply that Evans beach contamination is due to YAM. This conclusion cannot be substantiated and the text should be removed. Based on data produced by other studies, there is a suite of methods available to evaluate whether metals present in various sediment textural classes involve Teck wastes. Source analysis may become important when interpreting results and/or determining if suspected local secondary sources may be contributing metals to this specific portion of the river, such as the YAM and Bossburg areas. Thus, the discussion of the attribution of contamination should include the Trail Smelter or such discussion should be eliminated from the text.

Resolution: Text has been added to the various sections cited in the above a comment. The underlined text in the following sections is the added text. This text clarifies the purpose of this sampling is to help determine if local sources of contamination have the potential to contribute to contamination found at beaches in this reach of the river. The revised sections follow.

A4.1 Introduction

This document presents the quality assurance project plan (QAPP) for the Bossburg Flat beach refined sediment study (herein the 'study') along the Upper Columbia River (UCR). This work is being completed as part of the remedial investigation and feasibility study (RI/FS) conducted by Teck American Incorporated (TAI) under U.S. Environmental Protection Agency (EPA) oversight. Elevated lead concentrations were identified during sampling activities associated with the beach sediment study (TAI 2009). Subsequent investigations conducted by EPA under the Superfund Technical Assessment and Response Team (START) program in adjacent sites (i.e., the Young America Mine and Mill sites) identified elevated metal (i.e., lead) concentrations associated with historic mining and milling activities (WDNR 2008; Emerson 2012; TechLaw 2012a,b; and USEPA 2012a).

The objective of this study is to generate data that will refine exposure estimates and further inform risk evaluations for both human health and ecological receptors associated with near-shore sediments adjacent to and down-gradient of the Young America Mill (YAM) site. Specifically, further refinement in near-shore sediments is needed in areas adjacent to the former YAM site, the former cable ferry landing, and along the east riverbank from Bossburg Flat beach (river mile [RM] 716) to Evans Campground (RM 710) to determine the concentration of contaminants and determine, to the extent practicable, the sources of contamination. To meet this objective, data for target analyte list (TAL) metals and in vitro bioaccessibility assay (IVBA) data for lead and arsenic will be determined to support the human health and baseline ecological risk assessments.

A5 PROBLEM DEFINITION AND BACKGROUND

Lead concentrations above a screening level of 400 ppm were identified at Bossburg Flat beach (RM 716) and Evans Campground (RM 710) during beach sediment sampling activities conducted for the RI/FS. Additional investigations conducted in areas adjacent to Bossburg Flat beach confirmed elevated lead concentrations associated with historic mining and milling activities (WDNR 2008; Emerson 2012; TechLaw 2012a,b; and USEPA 2012a). Based on the elevated lead concentrations, a removal action at the YAM site was completed by EPA in 2012. At the time of writing, final documentation of work completed (including analytical data) remains in preparation. Consistent with EPA's level-of-effort (USEPA 2012b), further refinement and characterization is needed to refine exposure estimates of near-shore sediment contamination in areas adjacent to the former YAM site, the former cable ferry landing, and along the east riverbank from Bossburg Flat beach (RM 716) to Evans Campground (RM 710) to determine the concentration of contaminants and determine, to the extent practicable, the sources of contamination. These data are needed to support the human health and baseline ecological risk assessments.

A7.1 Step 1—State the Problem

As noted in Section A5, lead concentrations above a screening level of 400 mg/kg were identified in near-shore sediments at Bossburg Flat beach (RM 716) and Evans Campground (RM 710) during RI/FS sampling activities. Subsequent investigations confirmed elevated lead concentrations associated with historic mining and milling activities in areas adjacent to Bossburg Flat beach (WDNR 2008; Emerson 2012; TechLaw 2012a,b; and USEPA 2012a). Accordingly, further refinement and characterization is needed to determine the extent of near-shore sediment contamination between Bossburg Flat beach and Evans Campground, and adjacent to the YAM site and former cable ferry landing to determine the concentration of contaminants and determine, to the extent practicable, the sources of contamination. These data are needed to support the human health and baseline ecological risk assessments.

B1 SAMPLING PROCESS DESIGN AND RATIONALE

This section presents design details and rationale for this study, which will generate data to refine characterization of exposures to metals in near-shore sediments from targeted areas. Elevated lead concentrations were identified at Bossburg Flat beach and Evans Campground during the beach sediment study (TAI 2009, 2010, 2011). At some locations, total lead

concentrations exceeded EPA's human health screening level of 400 mg/kg (refer to Figure A7-2). Subsequent investigations conducted by EPA under the START program also identified elevated metal (i.e., lead) concentrations in adjacent sites associated with historic mining and milling activities, including the former YAM site (WDNR 2008; Emerson 2012; TechLaw 2012a,b; and USEPA 2012a). As a result, further refinement in near-shore sediment metal concentrations is needed in areas adjacent to the former YAM site, the former cable ferry landing, and along the east riverbank from Bossburg Flat beach (RM 716) to Evans Campground (RM 710) to determine the concentration of contaminants and determine, to the extent practicable, the sources of contamination. Consistent with the level-of-effort (USEPA 2012b), near-shore sediment sampling is needed to characterize metal concentrations (particularly lead) and relative bioaccessibility (lead and arsenic) in these sediments. In addition, further characterization within the Bossburg Flat beach and Evans Campground will refine spatial extents of locations where lead concentrations may exceed EPA's 400 mg/kg human health screening level. Surface sediment samples will be collected from these areas to refine exposure estimates and support risk evaluations for both human health and ecological receptors.

APPENDIX A

1 INTRODUCTION

This document presents the field sampling plan (FSP) for the Bossburg Flat beach refined sediment study (herein the 'study') along the Upper Columbia River (UCR), which extends from river mile (RM) 716 to RM 710. Information collected in this study will be used to refine exposure estimates and further inform risk evaluations for both human health and ecological receptors associated with near-shore sediments. This work is being completed as part of the remedial investigation and feasibility study (RI/FS) conducted by Teck American Incorporated (TAI) under U.S. Environmental Protection Agency (EPA) oversight.

The objective of this study is to generate data that will refine exposure estimates and further inform risk evaluations for both human health and ecological receptors associated with near-shore sediments adjacent to and hydrogeologically down-gradient of the Young America Mill (YAM) site. Specifically, further refinement in near-shore sediments is needed in areas adjacent to the former YAM site, the former cable ferry landing, and along the east riverbank from Bossburg Flat beach (RM 716) to Evans Campground (RM 710) to determine the concentration of contaminants and determine, to the extent practicable, the sources of contamination. To meet this objective, data for target analyte list (TAL) metals and in vitro bio-accessibility assay (IVBA) data for lead and arsenic will be determined to support the human health risk assessment. In addition, data collected during this study will be used to inform components of the ecological risk assessment (e.g., evaluation of risk to aquatic plants, sediment-probing birds, and other receptors). This FSP describes how and where near-shore sediments will be collected for chemical analyses.

Disputed Comment 2. TAI disputes EPA's requirement that TAI sample above the mean high water line at the YAM Site and Bossburg Flats. EPA's comment was

> In the LOE letter of November 15, 2012, EPA required Teck America Incorporated to characterize the vertical and horizontal extent of sediment and soil contamination in the

areas of the Young American Mill site and Bossburg Flats. While TAI did provide a sampling plan for the sediment in these areas, there was no discussion of soil sampling. Soil sampling should be included in this QAPP. To provide some guidance regarding this sampling, SRC, a contractor for EPA, developed a soil study memo which is attached. This report will have to be reviewed to insure that soil sampling as well as sediment sampling is included in the text. Also, the title of the QAPP should be revised to include "And Soil" after the word "Sediment".

Resolution: Following discussions between EPA and TAI, TAI has agreed to sample the soil as well as the sediment in the Young American Mill/Bossburg Flats study area. The purpose of this sampling is to help delineate possible sources in this area that may contribute to the contamination found downstream of these sites such as at the Evan Campground Beach.

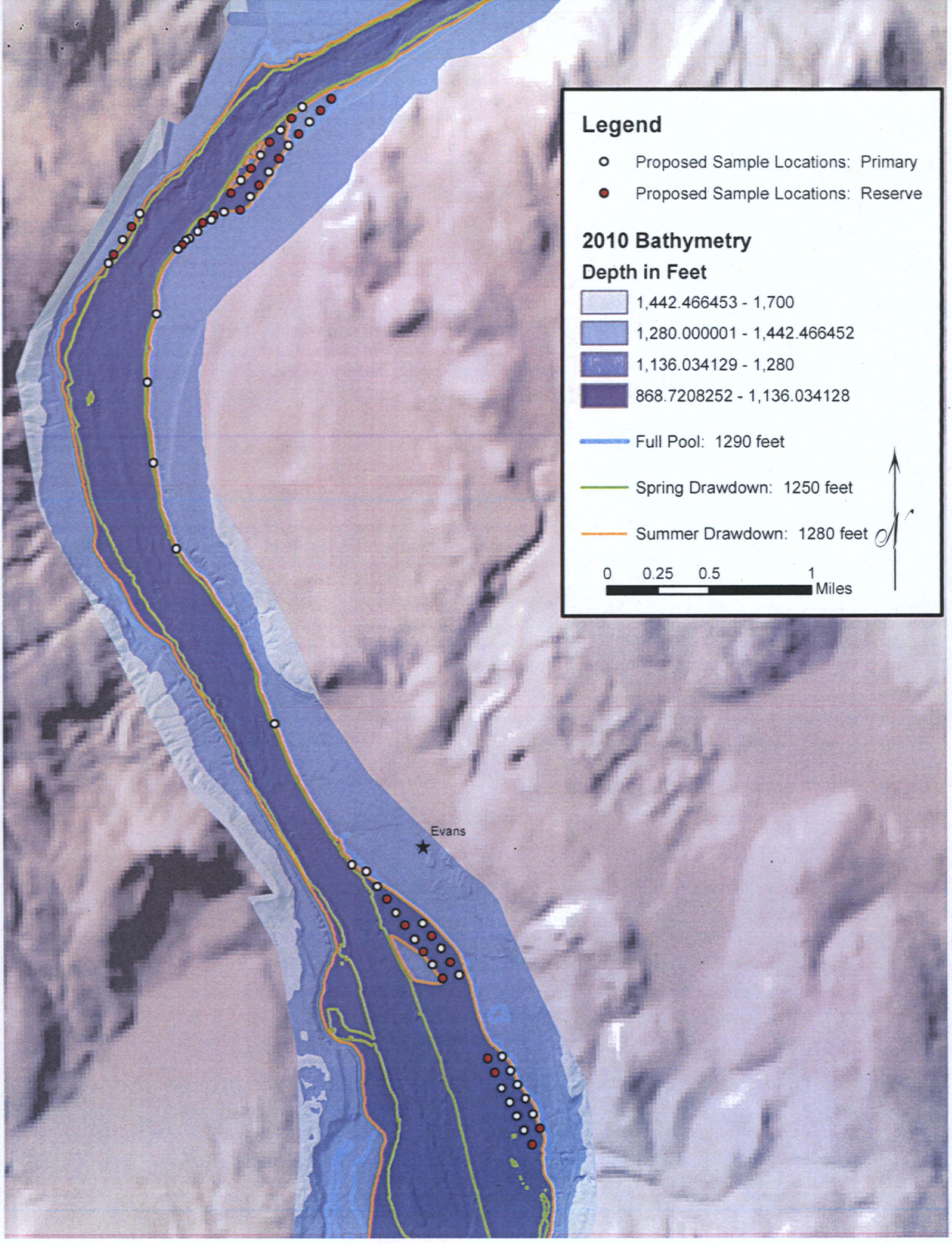
At the Bossburg Flats area field portable XRF measured elevated lead concentrations up to 3300 mg/kg lead in the plateau above the remnants of the ferry landing and Bossburg Beach. This is attributed to spills of ore and/or concentrate transported via ferry, rail spur, and/or road for processing elsewhere. At the Young American Mill Site, sampling found concentrations of metals, such as lead and arsenic, above levels for unrestricted use, probably due to releases or spills from the tailings pond.

The data provide by sampling both the near shore sediment and the upland soil should help determine whether, and to what degree, there is a pathway for the migration of metal contamination via surface runoff and wind transport from these sites to the Columbia River. The potential for erosion and transport from sources such as Young American Mill Site and Bossburg Flats to beaches downstream will be determined by this action.

Disputed Comment 3. TAI disputes EPA's incorporation in its Comments of Figures 1, 2, 3, 4, and 5, each created by Environmental International Ltd., and each containing the inflammatory language within the legend, "Teck Illegal Litigation Sampling."

The five figures cited in TAI's comments plotted TAI's proposed sample locations, contour lines of pool elevations at several times of the year to locate proposed sample locations relative to the pool elevation, and locations of the unpermitted samples that were collected by a Teck representative.

Resolution: Figures 1, 2, 3, 4, and 5 have been revised to include just the data locating TAI's proposed sample locations and the reservoir elevations thus making the purpose of the figures more clear. That purpose of the figures is to highlight the need to sample during the low draw down in the spring to better enable the collection of adequate sediment samples and eliminate any need to use boats to access the sample locations. The revised figures are attached.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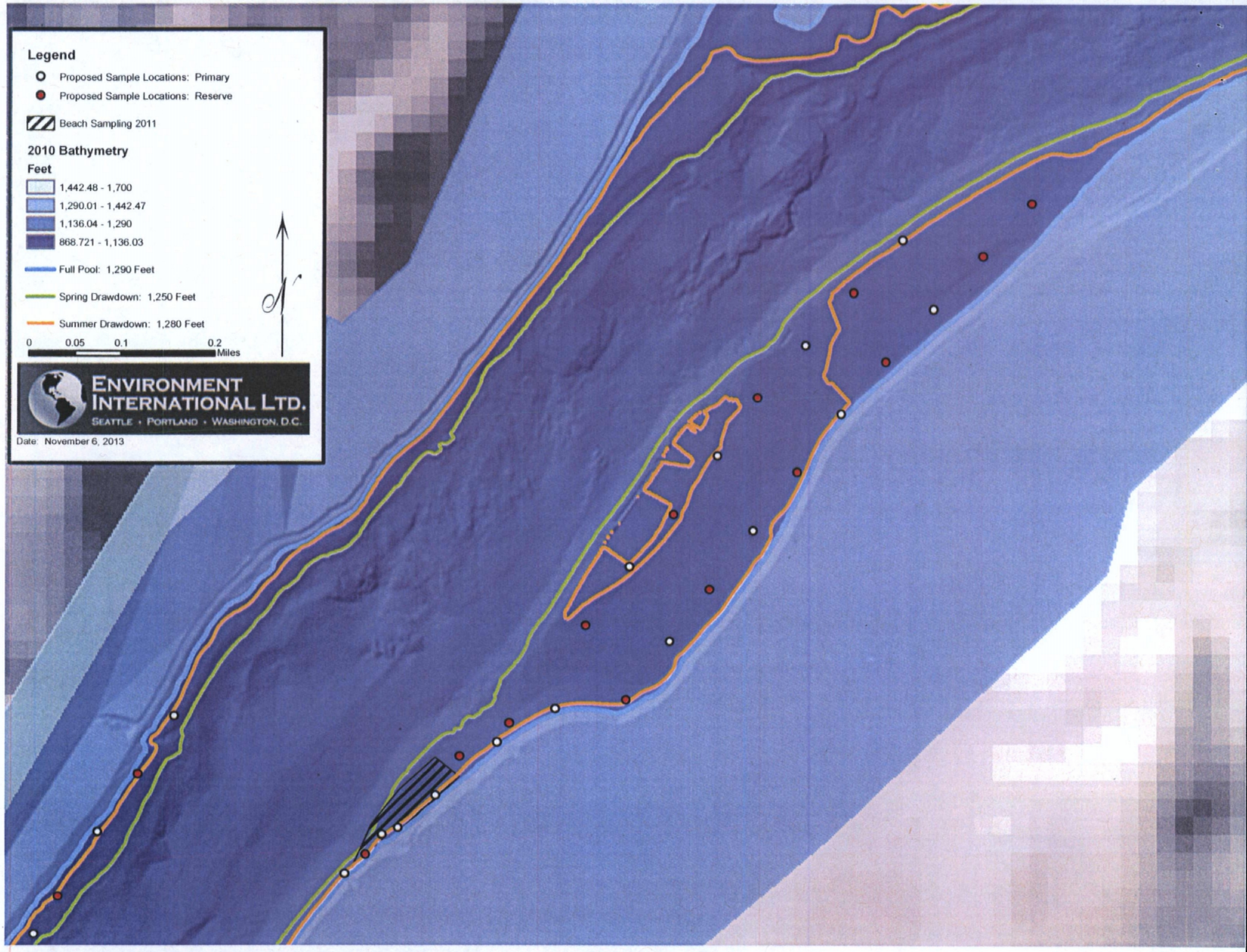
Proposed Sample Locations: Primary
Proposed Sample Locations: Reserve
2010 Bathymetry
Depth in Feet
1,442.466453 - 1,700
1,280.000001 - 1,442.466452
1,136.034129 - 1,280
868.7208252 - 1,136.034128
Full Pool: 1290 feet
Spring Drawdown: 1250 feet
Summer Drawdown: 1280 feet
0 0.25 0.5 1
Miles
Evans


Legend
Proposed Sample Locations: Primary
Proposed Sample Locations: Reserve
Beach Sampling 2011
2010 Bathymetry
Feet
1,442.48 - 1,700
1,290.01 - 1,442.47
1,136.04 - 1,290
868.721 - 1,136.03
Full Pool: 1,290 Feet
Spring Drawdown: 1,250 Feet
Summer Drawdown: 1,280 Feet
0 0.05 0.1 0.2
Miles
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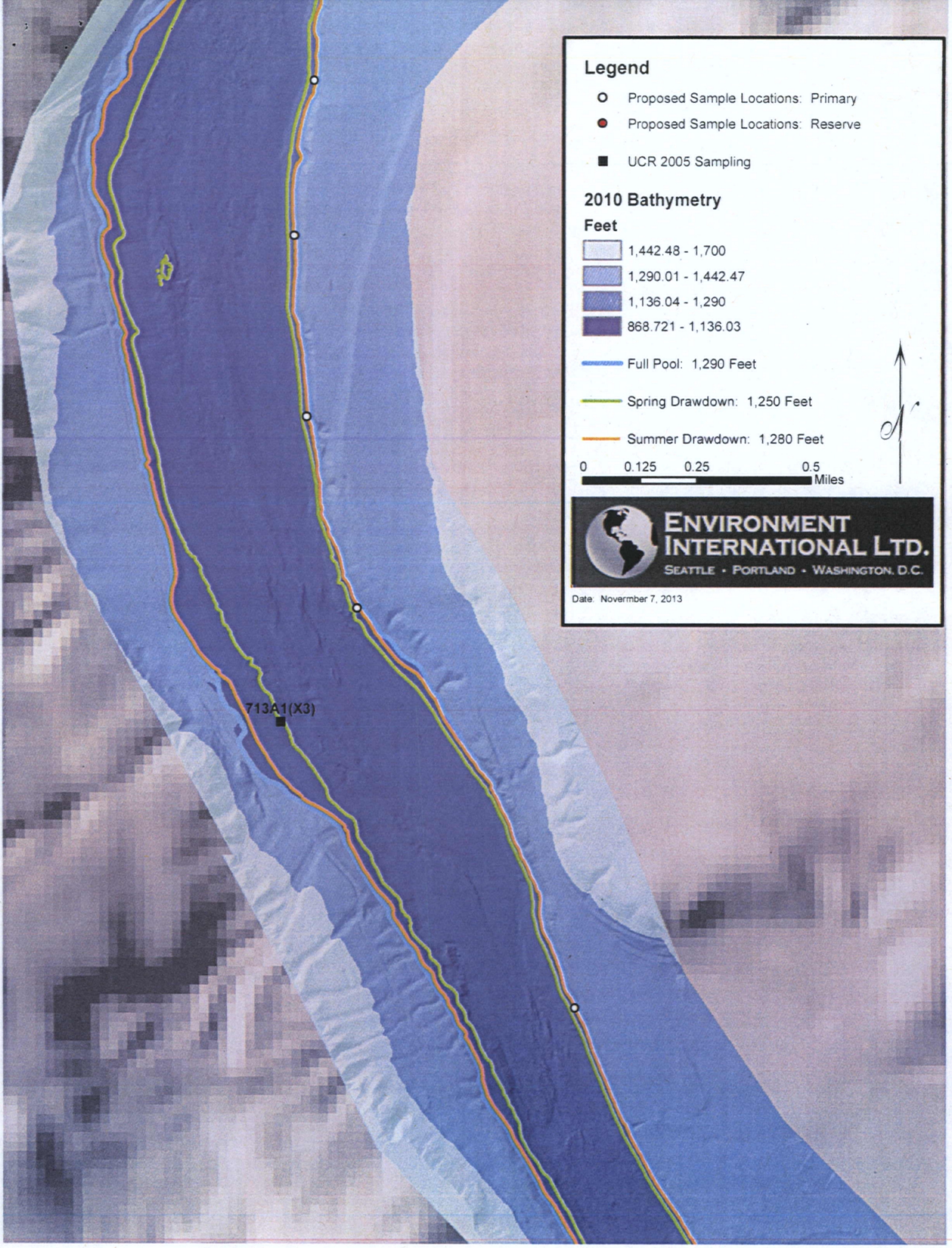

Legend

- Proposed Sample Locations: Primary
- Proposed Sample Locations: Reserve
- UCR 2005 Sampling

2010 Bathymetry

Feet

- 1,442.48 - 1,700
- 1,290.01 - 1,442.47
- 1,136.04 - 1,290
- 868.721 - 1,136.03

- Full Pool: 1,290 Feet
- Spring Drawdown: 1,250 Feet
- Summer Drawdown: 1,280 Feet

0 0.125 0.25 0.5 Miles

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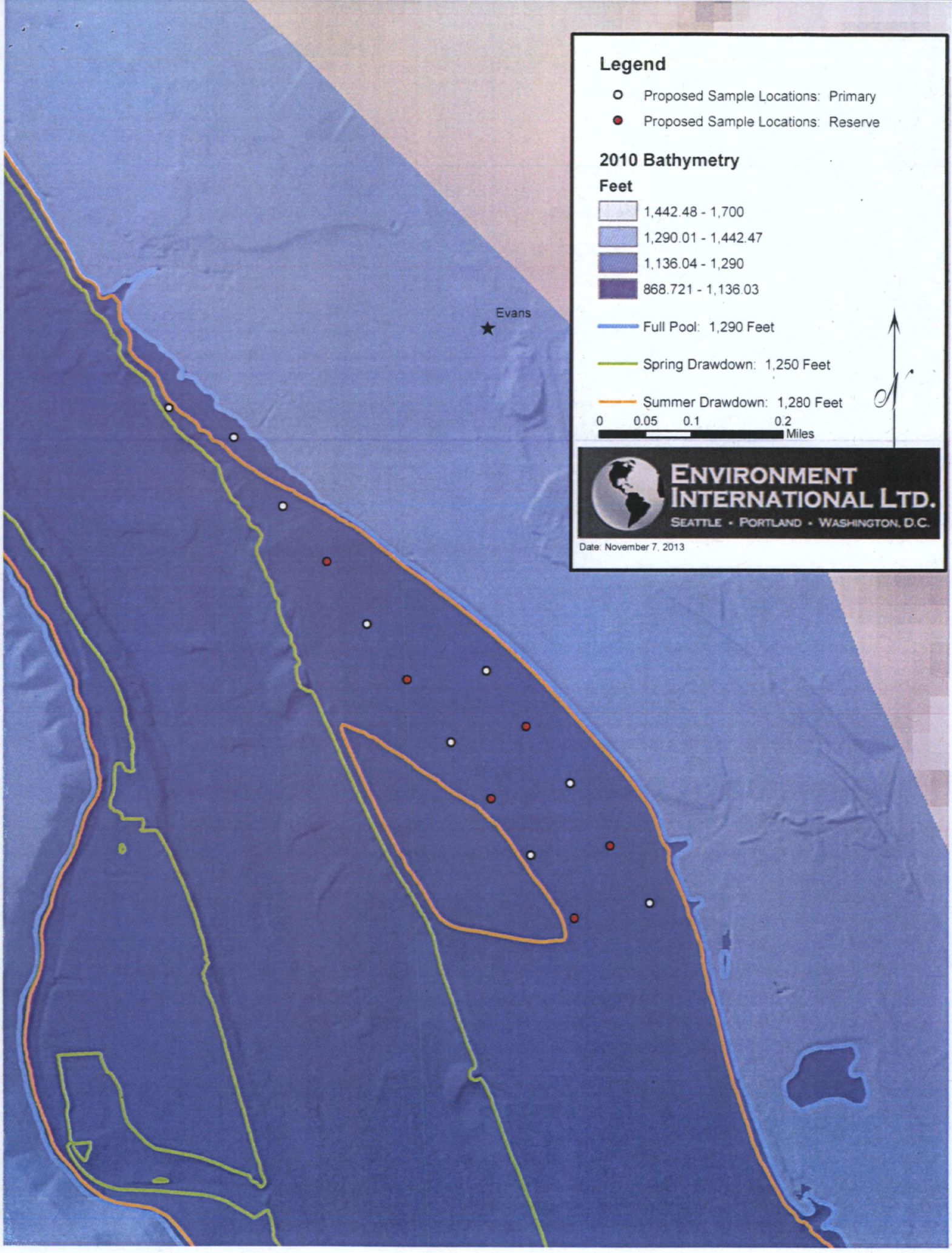
Legend
Proposed Sample Locations: Primary
Proposed Sample Locations: Reserve
2010 Bathymetry
Feet
1,442.48 - 1,700
1,290.01 - 1,442.47
1,136.04 - 1,290
868.721 - 1,136.03
Full Pool: 1,290 Feet
Spring Drawdown: 1,250 Feet
Summer Drawdown: 1,280 Feet
0 0.05 0.1 0.2
Miles
Evans
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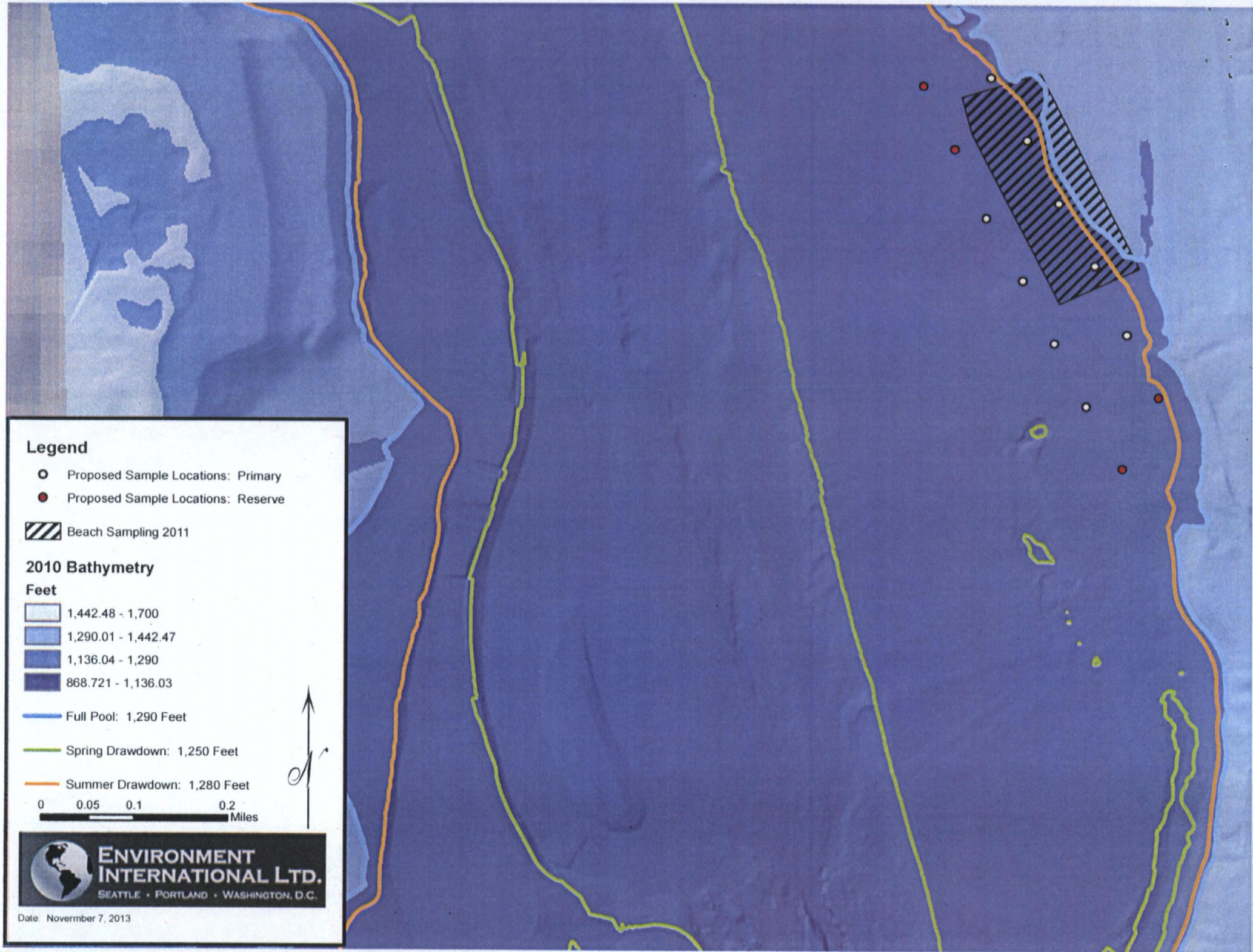
Legend
Proposed Sample Locations: Primary
Proposed Sample Locations: Reserve
Beach Sampling 2011
2010 Bathymetry
Feet
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0 0.05 0.1 0.2
Miles
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501 N Riverpoint Blvd
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